

WHAT IS CLAIMED IS:

1. In an offshore pipeline laying system, the pipeline being laid on the seabed by a surface laying vessel from a first position on the seabed to a second position on the seabed with a connector on the pipeline at said second position for making a connection to a subsea structure, and presenting a length L between the seabed and the laying vessel, a method for establishing the length of pipeline required to be provided from the vessel to reach the second position on the seabed, said method comprising the steps of:

installing a first seabed transponder on the pipeline route centreline at the second position;

installing a second seabed transponder on the pipeline route centerline spaced upstream from the first transponder at a distance D' greater than L ;

establishing the positions of the first and second seabed transponders so as to determine the exact distance separating said first and second seabed transponders;

attaching a first pipe transponder on the pipeline and laying the pipeline at the first position so that it will land close to the second seabed transponder;

interrogating the second seabed transponder and the first pipe transponder in a relative mode to establish the exact distance between them;

comparing the established distance with the distance separating the first and second seabed transponders to calculate the remaining length of pipeline required to reach the second position;

cutting the pipeline according to said remaining length;

welding the connector to the pipeline; and thereby

laying the pipeline to the second position with the connector being at the second position.

2. The method of claim 1, wherein the distance D' is comprised between $L + 300\text{ft}$ and $L + 700\text{ft}$.

3. The method of claim 1, wherein a third seabed transponder is arranged on the pipeline route upstream from the second seabed transponder.

4. The method of claim 3, wherein a second pipe transponder is attached to the pipeline upstream from the first pipeline transponder.

5. The method of claim 4, wherein the distance between the first and second pipe transponders is shorter than the distance between the second and third seabed transponders.

6. The method of claim 4, wherein the pipeline is laid so that the first and second pipe transponders are laid in between the second and third transponders.

7. The method of claim 1, wherein a third pipe transponder is attached adjacent the connector to help the positioning of the connector at the second position.

8. The method of claim 4, wherein said second and third seabed transponders are spaced about 500 feet apart.

9. The method of claim 8, wherein said first and second pipeline transponders are spaced about 300 feet apart.

10. The method of claim 9, wherein the pipeline is laid so that the first and second pipe transponders are laid in between the second and third transponders.

11. In an offshore pipeline laying system, the pipeline being laid on the seabed by a surface laying vessel from a first position on the seabed to a second position on the seabed, a method for establishing the length of pipeline required to be provided from the vessel to reach the second position on the seabed, said method comprising the steps of:
installing a plurality of seabed transponders along the pipelay route;
installing at least one pipe transponder on said pipeline; and
interrogating said seabed and pipe transponders,

wherein the seabed transponders are arranged sufficiently near the pipelay route centreline so that respective distances separating corresponding pairs of said seabed and pipe transponders can be used to establish the remaining length of pipeline needed to reach the second position.

12. The method of claim 11, wherein the seabed transponders are arranged on the pipelay route centreline.